

PHOTONIC CRYSTALS

ABSTRACT

A photonic crystal includes a phosphor matrix and a plurality of defect regions. The phosphor matrix defines a plurality of substantially spherical voids arranged in a triangular lattice arrangement. The phosphor matrix has a first index of refraction. The plurality of defect regions is distributed in a subset of the spherical voids. Each defect region has a second index of refraction that is different from the first index of refraction.